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### INDUSTRY AND MINING IN SIBERIA

South Russia has been exceedingly forward looking in the applications of science to the development of her natural resources. Projects such as Artic Research, the Papier Plateau Survey, and geological investigations are examples of this spirit.

Csarish Russia had developed coal mining only in the Donets Basin in Europe and in Siberia only along the railway.

With the introduction of the five-year plans coal resources were discovered in all directions. Coal production increased from 35,500,000 tons in 1928 to 152,500,000 tons in 1937.

Attention has been given, not only to increase of production, but also to an even distribution of production. Reserves in the Donets Basin are reported to be 40,000,000 tons [51c]. The Kusnetsk and Ural areas have now been combined into the Kusnets Ural united industrial area.

Coal reserves have been located in desert areas such as the Karaganda basin. Nearby in the Kounrad area are copper deposits, so this area is now known as a united copper industrial area and is considered a part of the Ural united industrial area and the third coal field in importance in the Soviet Union. Chelyabinsk lignite field are also considered important.

During the second five-year plan period smelters have been constructed in the Bureya coal producing area and this area is now termed the center of heavy industry in the Soviet Far Rast.

The Tungus coal fields in the Yakut Republic can supply fuel for the Artic shipping fleets. The Irkutsk coal fields can supply the new Angara - Baikal industrial area. The Menusinsk mines and the Kansk lignite fields are basic coal producing areas.

Formerly the only important oil producing area in Russia was the Caucasus which produced 69,000 tens in 1931, being 63% of the total for the Soviet Union. Newly discovered fields in the Bashkir autonomous Republic and in the Far East amounted in 1913 (615) to 9,234,000 tons. In 1938 this had increased to 28,860,000 tons. Ante-There is an evident discrepancy between the figures and dates given here and the information given in the previous sentence the First date probably should be 19317. The Sterlitamak area in Bashkir has become a second Baku. The oil field in this area extends 1,500 kilometers from the central section of the Volga to the Ural mountains. The reserves in this field are estimated at 3,000,000 /sic/ tens Th: The figure used here is 30 "i". This author has heretefore been using "i" in the sense of 100,000 which is the old Chinese meaning of this term, but the Japanese use it in the sense of 10,000,000 and modern (post-war) Chinese authors have been showing a tendency to follow the Japanese sense. It would appear the application of the latter sense here would fit in better with the author's description of the size and richness of this field

Production for this area in 1933 was 35,000 tens, but by 1937 it had risen to 1,350,000 or 2.9 percent of total production for the Soviet Union. The figure given here points up the discussion in the TM above since the figure given would represent more than one-third the total estimated reserves for this field taken out in one year if "i" is used in the sense of 100,0007

The Kao-mu-pan oil field on the east bank of the Ka-ssu-lo\*
Sea has oil resources of 18,040,000,000 tons. Th: Here the
lesser sense of "i" has been used for translation as the larger
sense would make a preposterous figure.

\* [Chinese transtration]

S. W. 15

The Khatanga River cil fields in Krasnoyarsk (150° H 10° H) and the coal of the Yenesey and Lena Basins can be used to settle the problem of fuel for Arctic Ocean Mavigation.

The recently discovered Turkmen oil field is producing approximately 10,000 tons a day.

Soviet iron reserves are estimated at 260,000,000 tens

[Th: The Chinese term here is 2600 "i" tens. The restricted
meaning of the term has been used here for translation. Compared
with U.S.S.R. 1940 production of 27,500,000 metric tens of iron
ore (U.S. Department of Interior Mineral Year Book, 1946) this seems
too small?

Reserves at Orsk south of the Urals are estimated at 400,000 (\*\*\*)

tens \*\*This Perhaps should be 400,000,000 tons\*\* This area with

the magnetogorsk Mines has become the heart of the smelting

industry in U.S.S.R. Besides this the Minusinsk iron mines,

being near the Kuznetsk Basin Coal fields, place them in a

favorable position for development.

Recently discovery of copper bearing ore amounting in the aggregate to 1,700,000 probably should be 1,700,000,0007 tons have been made in Kasakhistan, the Angara River Basin, Lake Bajkal Region and the Soviet7 Far East. The largest reserves are those discovered in 1928 in the copper beds of Kounrad on the north shore of Lake Balkash with an estimated 2,000,000 tons deposit. During the second five-year plan the development of copper smelting in this area was a part of that plan, as well as development of copper resources in the Ural Mountain Range and Kasakhstan in Central Asia.

Tin has been discovered in the Altai area and central Asia. Potassuim salts are found in the Urals and Central Asia. Modern machine methods have been introduced in mining these deposits.

Other minerals are found, such as nickel, mercury, sulphur, radium, etc. in sufficient quantities to form the basis for a modern refining and chemical industry.

STATE

Before the revolution only steam electric plants were in operation, hydro-electric plants were unknown. In 1928 1,905,400 kilowatts of electric energy was generated, in 1937 31,090,000. Hydro-electric plants were erected on the Pamir plateau to supply the current for the textile industry of Central Asia. The waters of Lake Baikal and the Angara river are also to be used to produce electric power, also peat, lignite and soft coal /for steam plants/

Siberian Electric Power Chart

Locality	Year	Power in units of	
Ural Province	1928	13.56	
Ural Province	1937	130.27	7.1
Kuibysher Ghkalov	1928	2.17	2.9 (sio)
Kulbysher Ghkalov	1937	18.03	<b>10</b>
Bashkiy ASSR	1928	.89	1.7
Beanki Passr	1937	5.10	0.10
W. Siberia	1928	1.92	0,5
W. Siberia	1937	<b>Щ.12</b>	1.0
Reselch assr	1928	•112	4.0
Nazakh ASSR	1937	19.48	0.2
Central Asia	1928	1.60	1.8
Contral Asia	1937	36.80	6.8 (sic)
E. Siberia Yakut ASSR	1928	.89	
E. Siberia Yakut ASSR	1937	13.13	0.14
Far East	1928	1.12	1.2
Ter Past	1937	24.77	0.6 1.4

ECHIE.

Siberia total	1928	22.57	71.6
Siberia total	1937	281.70	25.8
European	1928	167.97	88.9
Russia	1937	808.30	74.2
Soviet	1928	190.59	100.
Union	1937	1090.00	100.

The important ores found in abundance in Siberia are gold, coal, iron, oil, silver, lead, sink, copper etc.

Gold is the largest mineralogical resource of the Soviet?

Far East. Production in 1936 was 1,060,000 cunces, or about one-third of the world's production. Most of the gold produced in the Soviet Union is allevial gold. That produced in Siberia is entirely of this sort, constituting 60 - 70 percent of the tetal for the country. Siberian gold is produced largely in the Trans-Baikal. Amur and Maritime areas.

At the time of the 17th meeting of the International Geological Society in Moscow Russia's coal resources were reported as 1,600,000,000 tons.

Estimated Coal Reserves in Siberia Unit: 10,000 tens

Locality	Amou	et
Kuznetak Basin	45,00	55,900
Kuo-erh-lo-p'u Årea	ı,	54,500
Menusinsk Busin	4,3	00,000
Kansk Area	4,2	00,000
Ch'i-o-li-mi-Yenesei Basin	2,0	61,200
Irkutksk Basin and Trans-E	aikal Basin 8,1	39,700
Pur Basin	2,6	11,600
Kasakh Area	6,2	79,800
Turkmen Area		53,800
Khirgis Area	1,0	06,400
[라마 큐리		

41zbek

Uzbek Area

418,600

Tadalk Area

217,500

Chita Area

79,242,600

Total

150,399,700 **[81**0]

Siberian coal reserves are 91 percent of the total for the Soviet Union. The total coal production of the Soviet Union in 1938 was 133,000,000 tons.

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### Production Figures for 1937

Kuznetsk Besin	6,000,000 tons
Irkutak Mines	1,500,000 tons
Southern Ussuri	2,500,000 tons
West Coast of Sakhalin	250,000 tons
Vladivostak	500,000 tens
Chita	750,000 tons

Soviet mining interests have naturally looked with marked interest upon the gold deposits of Far Eastern Siberia, but more important are the very recent discoveries of magnetite, hematite and nodulated iron ores.

Ares of production are the Obluche district in Southern Ussuri, around the Southeastern shore of Lake Bajkal, northwest of Lake Bajkal in the Angara River basin, and on the upper reaches of the Ob River in the neighborhood of Stalinsk. Russian geologists estimate that about 25 percent of iron-bearing deposits contain ore of highest quality. From seven to ten million tons of this are in the Far East. Figures for 1936 indicate the aggregate reserves of iron for the Soviet Union to be 10,600,000,000 tons of which 40,000,000,000 are in Far Eastern Siberia.

SEWA

Cutside an area of Northern Sakhalin along the southern Coast
line which has been exploited for oil, other areas merely show
signs of oil or are in an experimental testing stage. That oil field
along the eastern coast of Northern Sakhalin is the only field in
the Far East operating entirely under Russian control. The operation
carried on by the joint Japanese North Sakhalin Oil company and the
Soviet Trust is in a decadent condition. According to a
report given at an International Geologists Society meeting in
Moscow in 1927 there were reserves of 340,000,000 tens in this
area. If the area could be worked to capacity an annual preduction
of 200,000 tens would not be difficult. In the southern part of
Kamchatka Peninsula experimental work is being carried on along the
northwest coastal area. Experimental work is being carried on on
the southeast shore of Lake I-ke-chia-crh, but there is no production
as yet.

Some areas in which signs of oil were discovered early are listed below:

- 1. Wu-ssu-t'e-pao-erh-t'e (Upper reaches of Yenesei)
- 2. Uilyuisk [?] (On the Uilyui River, branch of Lena)
- 3. T'a -mo-t'e (Branch of Lena)
- h. Altan (On the upper Orkhon)
- 5. Kuznetsk (near Stalings)
- 6. Ta-pu-chi-ssu River Basin (near Surgut on mid-volga)
- 7. Nordvik (Mouth of Rhatang a River on Artic)

The total oil reserves of the Seviet Union according to a 1937 survey were 63,000,000,000 tons. Annual production was 32,000,000.

Far Eastern production was slight.

Production of silver, hleady and czinc in the Soviet Union in 1933 amounted to 400,000 tons. 90,000 tons came from Rastern Asta 140,000 tons from Western Siberia and the rest from the Caucasus and the Kasakh Republic. The center of silver, lead, and sine production is in the Far East is the T'i-ch'iu-na ere bed with reserves of 2,000,000 tons with an average content of 12 percent of lead, 17 percent of sine and 280 graps of silver, This is the richest deposit of these metals in the entire Soviet Union. The Chukatsk Peninsula on the Bering strait also has important mineral deposits.

The Aginskoo copper mines in the Trans-baikal area were opened in 1727 /sic7 and produce, yellow copper /Chalcopyrite7 are, blue copper /copper sulphide7 ore, and galenite ore. Average copper content is seven percent. The Kurunsulay copper mines are well-known. The Maritime area produces silver, lead and sinc. Large production is also found in the Petropavlovsk area, the Komandorski'ye eastern coast of southern Kamchatka, and the Kamandorski Islands.

Near Ch'a-yu-ssu-t'A-1 An. Not shown on available maps.

Village at the confluence of the Sungari and Amur Rivers for a distance of 150 versts along the north bank of the Amur is earth producing 19 to 22 percent of graphite.

Opposite Pu-ch'ao Waldwortck (?) on the Fu-la-chi-mi-erh\*
River which flows into Amur Bay Mr. There seems to be no bay by
this name on the map nor any river of the name given in the area
where one would expect to find an Ama Bay. graphite bearing
soil of the richness of 55 lb nercent to 59.28 percent is found
in open beds with reserves of 1,000,000 tons. In northern
Kamchatka on the Chukvtsk Peninsula in the neighborhood of the
Bay of Sheng-la-wu-lin-chi-i the T'ien-te-k'a-erh mountains
contain graphite having femous a carbon base content of 96 percent.

The Neither the bay or the mountains appear on available map

Molybdenum is found on the Outer Mongatian border southeast of Lake Bakkal along the course of the Ch'i-k'a Khilok ?7.

Iraidescent molybdenum has been discovered in the Iretskoye Bay area on the coast of the Okotak Sea.

Investigations reveal that there is production in the neighborhood of Lo-i-te Bay on the northeast wash of Askol'd Island off the southeast coast of P'u-ch'ao.\*

Fluor-spar deposits are reported in three areas:

- 1) At Po-k'o-ch'i mear Sa-chi-k'o Village about 200 versts northwest of the confluence of the Sungari and Amur Rivers. The ore is sparkling with a fineness of 25 percent and has reserves of 30,000 tons.
- 2) 130 versts south of Chita at Ta-wu-li-ta-wu-erh-chi-ssu-kai-ya\*

  [Fossibly Duldurga]
  - 3) About 50 versts northeast of Manchouli (Lupin).

In northeast P'u-ch'as on the upper reaches of the Pu-lo-ko-ya-pa-chi River near the Ob Bay manganese is produced.

In Csarish Russia industry was centered in European Russia; Chiefly in the Leningrad, Moscow, Ivadeu and Corki areas.

Concentration of industry in this border area had no relationship to the location of raw materials, but rather to communications and population density. The Ukraine produced only coal and iron and the Urals were only considered a source of metallic cres. Siberia and Gentral Asia in accord with their natural conditions were degraded only as a source of certain raw materials and a market for finished goods

In 1930 Stalin set forth the proposition that raw materials and factories should be brought together to save hauling and labor concentrated in areas of industrial production to reduce the conflict between supply and demand.

Industrial production in 1928 in Russia amounted to 1,800,000,000 rubles worth (fifth in the world).

In 1932 production reached 36,000,000,000 rubles worth (third in the world) and in 1937 at the close of the second five-year plan it reached 83,000,000,000 rubles worth (second in the world).

The increase of industrial capital during the second five year plan was, for European Russia, 88 percent for Central Asia 27.7 percent, and for Western Siberia and Kazakhstan 28.3 percent.

Production of iron increased from 3,000,000 tons in 1928 to 10,600,000 tons.

The coal fields of the Kuznetsk basin were combined with the iron mines of the Urals to form a united industrial area second only to that of the Ukraine as a base for mineral refining and mechanized area for non-ferrous metallurgy, chemical industries, and machine shops. There were two iron smelters in the Kuznetsk area and many factories under construction,

Coal from the Purisial area in the Soviet Far Rast has been teamed up with iron from the lesser Hsingan mountain range on the left bank of the Amur to provide for a smelter. This smelting industry provides metal for military and railway materials and machinery and for ship yards in the Maritime territory.

Since imperalist Russia's non-ferrous metallurgy was largely sponsored by foreign capital or imported from abroad the Soviet government invested 73 percent of their funds for new metallurgical development in factories for production of copper, lead, zinc, nickel etc. under the second five-year plan. Plants were established in the Urala, the Kuznetsk basin, Central Asia and Eastern Siberia. The Urals are the chief source of copper. Much attention was paid to reviving production in this area while at the same time developing new sources in the Kounrad district on the north shore of Lake Balkhash

and in the Tashkent area. A mixed metallurgical industrial district was set up at Chimkent in South Kasakhstan and also to set up zinc and aluminum works in Siberia and the Urals.

The earlist Source of production of nickel was in the Urals. Tin mines have been opened in Eastern Siberia.

There have been yearly finds of gold and allavial gold in the Urals, Altai and the Soviet Far Hast. The production of this metal has now been 70 percent mechanized.

The Soviet government has shifted heavy industry into the new industrial district in the Urals and Kusnetskareas having only motor boat, automobile, clock, spectacle, and measuring instrument factories in the old industrial district in European Russia.

The move to the east washot only to bring industry nearer to the smelters, but also to develop industry in the eastern area.

Automobile factories have been built in the Urals such as the Chelyabinsk (?) [K'o-li-pin-ssu-k'o] truck factory and the Sverdlevek Mettalurgical machinery factory, which can turn out 40,000 brucks a year The the use of the numerous adjunct here for vehicles seems to indicate that the figure would be referred to the truck factory mentioned above.

Under construction are the Sverdlovsk chemical machinery factory, an electrical machinery factory, the Orsk lecomotive factory the Tas [?] wagon factory etc.

Included in the second five-year plan were constructions of the Novosibirsk mining [machinery] factory, the Ulan Ude locomotive repair shops, automobile factories in the Far East etc. The Tashkent farm machinery factory has been completed.

A flour mill has been constructed at Semipalatinsk in Kazakhistan.

14.2 percent of the capital devoted to development of the

chemical industry under the second five-year plan was allotted

\* Chinese translateration 24

constructed ammonia, oxygen and sodium plants. At Pa-lai-asu-ni-vu-fu<sup>\*</sup> there is the largest Potassium chlorate plant in the world. It is planned to connect it with a copper factory and produce sulphuric acid.

A united chemical industries district has been established at shoothate.

Aktyubinsk in order to develop the Kazakhistan Phosphar Ach rock

The baselish deposits. There are new sulphur works in the

Turkmen desert. A number of other factories are in the planning

stage, largely to utilize Glamber's salts.

It is planned to use Tashkent hydroelectric power to manufacture carbon base fertilizer, wood products factories, and rubber from alcohol, etc.

The development of the Soviet heavy industry has been, heretofore, at the expense of light industry and food processing, but an interest is now being taken in planning a more equitable development.

The first developments in the textile industry took place in Central Asia, later on expanded to Stalinabad and sourrounding territory which became a cotton textile united industrial area.

The wood supplies are of Western Siberia are being exploited for paper manufacture and large mills are being constructed. The Turk-Sib railway is used to transport lumber to the weaving centers of Central Asia.

Woolen, leather and shoe industries are being planned for Bashkir and western Siberia.

A large number of sugar factories have been opened in the Kazakhistan Kirghiz and Black Sea areas. In the Soviet7 Far East are newly established ceramic industries, and tobacco factories have been moved to areas adjacent to sources of iron materials in the south. The sunflower oil industry is being removed to areas in Kazakhistan and Eastern Siberia where raw materials are produced.

While not everything about the Soviet industrial plans is

crystal clear as yet to the observer, certain postulatives may be made. In their investment of capital they incline toward industries that will be most efficient in production, they have high regard for suiting the location of an industry to its nature, in order to realize the greatest possibilities of the tie-up. With regard to the operation the aim is to secure the maximum results. Within an industrial area overy main section and subsection is carefully planned to establish the most efficient relationship between the use of raw materials and the labor expended on them. For example in refining copper it is planned to exploit at the same time the by-product of sulphuric acid, or in the cotton textile industry, not only are textiles to be woven, but the cotton-seed oil industry will be located in the same area, etc.

In the establishment of united industrial areas the Soviet government sought to further this economic plan by conservation of \[ \text{Transport} \] in placing industry near sources of raw materials, and at the same time developing new areas of economic activity.

During the first and second five-year plan periods the emphasis was on heavy industry and upon smelting works as the most important factor in heavy industry.

The Soviet's largest industrial area is the Brieper United Industrial Area. Its closest competitor is the Ural industrial area. Because the Urals have little coal Dut much metal, the KnzhetekvBasin little metal, but much coal the two areas have been constituted amindustrial area centering at newly-built Magnitogorak where eight smelters are under construction which when finished, will be able to produce annually 2,700,000 tons of pig iron.

In addition to this are nearby Orsk Bakal, Khalibvvo [?], and No-pac-t'a-chi-erh-ssu-k'o, Krasnouralsk, Cheliabinsk [?] etc. Scattered among these are manganese, sinc, and nickel works, altogether constituting a very concentrated treasure trove.

A second Ural Kusnetsk united industrial area centers at Kusnetsk the world's greatest coal producing area, along the Turk-Sib Railway. In 1937 this area produced 20,000,000 tons of coal. It is planned to use 65% of the magnitogarsk  $\bar{0}$ re to construct a smelter designed to produce 1,600,000 tons  $\bar{0}$  pig-iron. It is expected this will be finished during the third five-year plan period.

The raw material supply for the industrial areas mentioned above are 1) the newly opened T'i-mi-erh-t'e iron mine (annual production 850,000 tons) 2) Tashkent, Kao-erh-ssu-ko mine (annual production 1,500,000 tons) and the projected Kao-erh-ne-le-ssu-k'e iron mining area.

With iron smelting as the basic industry and combining nonference metallurgical industry with it, by constructing machine factories, chemical works and steam-electric plants in the same area a new city of Kuznetsk with a population of 500,000 may be built up within five yars.

South of Krasnoyarsk on the Siberian Railway are the Minusinst Coal mines with estimated reserves of 17,000,000,000 tons /TN: Here again the figure depends on the interpretation of the numerical term "1"7. 140 kilometers from these mines are the Abakan iron mines (with estimated reserves of 45,570,000 tons). Plans are in the making to route these two areas into a united metallurgical industrial area.

In the Soviet Far East there is a united industrial area in the Jewish Antonomous Province. North of this is a Bureya united industrial area depending on the coal of the Bureya area for its Khabaroksk power. It takes in the Tharbyrveck and Konisomolsk districts.

At Chinkent in Central Asia's Kasakhistan is a mixed metallurgical industrial area.

There is the Balkhash industrial area around Karaganda north of Lake Balkhasp.

Water from the Tien Shan range in the central desert powers electric generators to turn the wheels of the textile united industrial district.

Khabkatz [?] has its sulphur united industrial area and Khabkatz [?] Bay its soda industry area. In the north are the lumber industries of Krasnoyarsk and Igarka constituting a united industrial area. Thus each area has its industrial area and put together these constitute, the Soviet Union a great united industrial area.

From the above-recited conditions it is evident that Soviet industry inclines to heavy and chemical industries and that the present third five-year period peace-time industries are being sacrificed in the interests of military industries. Thus each of the united industrial areas becomes a military base.

It is evident, also, that the drift of industrial development is toward the interior of the country.

Basin and the Ural-Kuznetsk area. All of the industrial areas eastward of these white upon China's northeast and Japan.

From this is apparent the inevitable "drang mach osten" of the Slav race inherent in historical and geographical factors involved.

We cannot but recognize the danger that threatens from this tendency.

Vegetables were originally grown only in the Ukraine and Kursk areas, but have now spread to the Pacific. Asiatic hemp has moved eastward from the forested areas. Egyptian cotton is now extensively raised on the Kirgiz steppes. Paddy rice has moved from the low damp areas at the par East to Kasakhistan.

SECTION

As a result of the first two five-year plans Siberia east of the Urals has become second only to the Ukraine and Volga basin in wheat production. There is still much virgin arable land in the lowlands and broad untilled areas of Western Siberia. Large scale collective farming is being introduced at present. With the movement of industry eastward the eastward shift of agriculture has become a necessity for national defense and the area east of the Urals becomes a base for grain production having an important relation to national planning.

In 1940 the Soviet government proclaimed the intended mechanisation of agriculture in the east in order to boast production of grain. That year grain acreage was 9,514,900 ares [I are equals .0247 acre] and the total for all agricultural products 10,000,000 ares.

In 1937 grain production in Western Siberia, excluding Krasnoyarsk, was 10,516,000 tens, which was four times the production in 1913.

Production of grain in 1938 was divided as follows:

Туре	Percentage
Spring wheat	55 <b>.7\$</b>
Oats	29.5%
Winter wheat	8.85
Barley	2.9%
Hillet	1.2%

Spring wheat grown in the Soviet Union amounts to 28.3 percent of the total for all grains. In 1937 the price capita grain production for the country was 48.29 poods Th: 1 pood equals 36 pounds Production per capita by areas for 1937 was as follows:

Province

Production (Poods) per capita

23.29

Novosibirsk

Omek

59,23

Altai Area

65,50

## Administrative Districts of Sestern Siberia

<u>District</u>	Area (ec km)	Population	Capital
	306,000	129,000	Kolpashevo
Harym Oriot	93,000	122,000	Oriot Tura
Onek	532,000	2,190,000	Omsk
Tonenoversk	2,144,000	1,628,000	Krasnoyarsk

# Subdivisions of Cask

Subdivision	Area (so km)	Population .	Capital
Ters	72,000	248,000	Tare
Oskyako-Yogulez	55,000	103,000	Samerovo
Yanalak	466,000	30,000	Salekhard

# Subdivisions of Krasnoversk

Subdivictor	Area (sa km)	Population	Capital
Taimyr	743,000	8,000	Dudinka
	542,000	6,000	Tura
Evenki	50,000	173,000	Abakan
Khakass	50,000	•	

3000

Western Siberia is a vast expanse of boundless prairies.

After the liberation of the serfs in 1861 some colonisation began and this was accelerated by the completion in 1896 of the Siberian Railway. During Gzarist days the only industries were leather and textile industries. With the discovery of the country's greatest coal fields in the Rusnetsk area and the combining with the Ural metal-producing area this area has become the greatest industrial area of the Soviet Union.

The saying that iron drifts toward coal not coal toward iron is based on the fact that it requires two tons of coal to smelt one ton of iron. Under natural conditions, consequently, coal producing areas grow faster industrially than metal producing areas, but the Soviet authorities have used their political powers to bring about a balance of economy by creating a united industrial district in the Ural-Kuspitsk area. Other metals such as lead, zinc and copper are also plentiful in the area and are now being exploited. In the southeast water power from the Altai mountains and nearby oil make power supplies plentiful hence this area is not only agriculturally important, but has also become an nutstanding industrial area. Large cities have developed here such as Lenisk (population 66,300), Stalinsk (population 199,800), Bisk, center of the Kuznetsk coal industry, Novosibirsk, Omsk, and Tomsk and they are growing fast. Novosibirsk at the junction of the Siberian and the Turk-Sib Railways is the metropolis of the area.

Omsk (population 227,000) and Tomsk (population 128,400, are not only important industrial centers, but are are also distribution points for wheat, buckwheat, oats, hemp and perspecial products.

Heavy industries in addition to smelting are farm machine factories at Novosibirsk and Barnaul, gold mining and oil production at Abakan. At Novosibirsk and Kenasone are oil refineries with a capital investment only a third less than that of the Baker area, with important results in fueling the industries of this area.

Chief light industries are textile oil refining, flour milling, leather, and sugar industries. Raw materials for the textile industries arrive over the Turk-Sib Railway from Central Asia. Rail lines in addition to the Siberian line are the Movosibirsk-Lenisk, the Lenisk-Kusnetsk, and Kusnetsk-Telbes lines.

At present there is no main line into northern Siberia, but it is being planned.

There are a number of small autonomous provinces on the border of Sinkiang and Outer Mongolia made up of roving Mongol, and Turki tribes that are included within the Krasnoyask jurisdiction.

Hastern Siberia, west of Lake Backal and the Yakutek Republic, has Irkutek as its chief City. Its area is 1,791,000 square kilometers and population 2,221,000.

### Subdivisions

1. Burat-Mongol Autonomous Republic

Chief City

Area

Population

Ulan Ude

376,000

605,000

2. Wei-ti-mo--- A-li-k'o-min-ssu-k'o Sp. Adm. area

Ko-la-ken\*

220,000

10,000

Prior to 1936 Krasnoyarsk belonged to Eastern Siberia while Sverdlovsk and Chelyabinsk which were formerly considered to belong to Siberia are now reckened within European Russia. Yakntsk Autonomous Republic has an area of 3,031,000 siqkm and a population of only 328,000. The capital is Yakutsk.

Because of climatic conditions, lack of good agricultural soil, and distance from European Ruscia Eastern Siberia has lagged behind in industrial development.

However in the Angara River - Barkal district there are great potential resources of water power and large reserves of iron, manganese, tin, zinc, coal and peat. Consequently the Soviet authorities have set up the Angara - Barkal united Industrial Area.

Porests cover 70 percent of this vast area and are especially heavy along the banks of the Keneset. Where the Siberian Railway passes through the Southern part of the area forests are thin and the black soil is suitable for agriculture.

Some peaks of the Yablonev mountains tower to 5,000 meters in height. There are many lakes of which the largest lake Bakkal has an area of 34,000 sqkm, being the world's fifth largest lake.

Some of these lakes are sufficiently saline to make their commercial exploitation feasible.

The Buriat-Mongol Autonomous Republic, lying south of akutsk and Southeast of Lake Bankal has an area of 376,300 sqkm. Grazing is the chief economic activity, but about 60 percent of the area is now devoted to collectivized agriculture. Other industries are leather and glass manufacture. Ulan Ude is the expital and metropolis.

The Autonomous Republic of Yakutsk, which embraces the territory of the Lena River basin, has an area one-fifth the size of the entire Soviet Union, more than 60 percent of the area is forested. the population of this wast area is only slightly over 300,000, engaged in hunting and lumbering. Furs are an important product. In the south communications are limited and in the north the long winters make communications backward. The three months summer only permits partial thawing of the winter's ice and snow.

There is air communication with Irkutsk. When arctic-Ocean traffic becomes a reality navigation on the Lena can be expected to pick up.

Natural conditions prevent any bright prospects for agriculture in this area and the problem of food supply multiplies the difficulties of economic development here. Mineral products available in the area are coal, iron, gold, platinum, gypsum and others, but mining has not yet developed. Along the Arctic coast line there are widespread deposits of ivory, evidence that this area must have once enjoyed a far milder climate than at present.

The Soviet Far East lying between the Yakutsk Republic and the Pacific Ocean has an area of 368,000 squa with a population of 1,860,000. The capital is Kharborovsk. Khabarovsk.

Province	area ( En Kv	) Pranletion
1. Amur Province	205, 500	Population 423,000
<b>Gentling</b>	Acces (p4log)	Population-
Blagoveschensk	205,000	4 <del>23,000</del>
2. Cha-ssu-k'o Province	不	
Lo-k'o-lo-ru* (Capital)	186,000	122,000
3. Kamchatka	不	<b>7</b> 3
Petropavlavek (capital)	不 125,400	60 <b>,000</b>
4. Lower Amur	不	$\boldsymbol{\pi}$
Nikolotvek (Capital)	968,000 (sic)	85,000
5. Maritime Territory	不	**
Vladivostok (capital)	111,000	422,000
6. Sakhalin	不	A.
Alexandrovek (capital)	41,000	69,000
7. Ussuri	不	
Vereshilov (Mikelsk-Ussurish Khabalovsk (captal 8. Eherberevsk	145,000	362,000
	*	$\pi$
Kharborovsk (capital)	160,000	260,000

9. Jewish A. Province

Birobidzhan 73,000 50,000

10. Koryak Adm. Dist

Palana /TN: from German Gazeteer) 46,000 13,000

11. Chukotsk Adm. Dist

Anadyr 728,000 [sig7 19.000

The Okatsk Sea has a cold current which makes the Maritime
Territory a cold area. This cold current also makes Kamchatka
a land of tundras.

Coal and oil are abundant, and have been developed in Sakhalin especially. Forests cover much of the territory and the coastal fisheries industry is very important to the economy of the region. The climate conditions preclude any extensive development of agriculture.

Strategically this area occupies an important position internationally, affecting the relations of Russia, America and Japan. After the occupation of Manchuria by Japan the Soviet government regarded her defense requirements in this area as very important and immediately began a migration of people to the area in the determination to build up an independent military area that could defend itself against attack. Vladivostok has been developed into a strong mayal base. While troubled by floating ice in winter Vladivostok is not at any time really an ice-bound port.

The earliest industries of this area were lumbering and fishing. Now, with coal and oil in Sakhalin, iron in the lower Amur valley and less important metals around Vladivostok, the

Soviet authorities are bending every offort to develop an industrial economy in the area and to increase the population by immigration from the west.

by immigration from the west.

\*\*The control of the area is a racial melting pot. While
Russians predominate in the population, there are also goodly
numbers of Tungusks, Mongols, Jews, Koreans, Chinese and aborigines.

Strategically, economically, and in the matter of communications, Vladivostok with a population of 190,000 is the predominant city of the area. Voroshvlor, Kharborovsk, and Nikalaysk are growing industrial centers.

When we Chinese recall that all this area was once China's our hearts should thrill to the patriotic hope that China may someday recover it.